

--	--	--	--	--	--	--	--	--	--

TABLE NO: \_\_\_\_\_

# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

TRIMESTER 2, 2019/2020

**TIS2351 – HUMAN COMPUTER INTERACTION**  
(All sections / Groups)

28<sup>TH</sup> Feb 2020  
9.00 – 11.00 AM  
(2 Hours)

---

### INSTRUCTIONS TO STUDENTS

1. This question paper consists of 13 pages with 2 parts only.
2. Attempt ALL questions in **PART A AND PART B ONLY**.  
The distribution of the marks for each question is given.
3. Please write all your answers in the answer box associated with each question in this question paper.

**PART A – MULTIPLE CHOICE QUESTIONS (20 MARKS)**

Write down your answer in the answer box provided. Write A, B, C or D.

Answer

- Q1) The textbook defines “Interaction Design” as \_\_\_\_\_.  
A) It is concerned with the problematic system, whether it is infuriating, inefficient, difficult to use and confusing.  
B) It is concerned with designing the usable products or systems than for better user experience.  
C) It is concerned with designing the evaluation of interactive products and systems than well-designed products of effective functions.  
D) It is concerned with designing interactive products to support the way people communicate and interact in their everyday and working lives.
- Q2) Bad design in interactive systems indicates the following:  
A) It is aesthetically pleasing and enjoyable to use.  
B) It is inefficient to carry out particular task.  
C) It is a simple but elegant design.  
D) It requires only one-step actions to perform core tasks.
- Q3) All of the following statements are TRUE, EXCEPT:  
A) Designing interactive systems requires who is going to use them.  
B) Designing interactive systems requires when they are going to be rewarded.  
C) Designing interactive systems requires how they are going to be used.  
D) Designing interactive systems requires where they are going to be used.
- Q4) \_\_\_\_\_ is one of the design practices that concerned with interaction design.  
A) Engineering.  
B) Ubiquitous computing.  
C) Cognitive science.  
D) Graphic design.

To be continued...

**Answer**

Q5) \_\_\_\_\_ is one of the academic disciplines that concerned with interaction design.

- A) Graphic design.
- B) Engineering.
- C) Artist-design.
- D) Industrial design.

Q6) Which of the following is NOT the four basic activities in interaction design?

- A) Establishing requirements.
- B) Designing alternatives.
- C) Prototyping.
- D) Building user experience.

Q7) Efficiency is one of the usability goals that refers to \_\_\_\_\_:

- A) The extent to which the product provides the right kind of functionality so that users can do what they need or what to do.
- B) How easy a product is to remember how to use once learned.
- C) Protecting the user from dangerous conditions and undesirable situations.
- D) The way a product supports users in carrying out their tasks.

Q8) The purpose of \_\_\_\_\_ is to provide the interaction designer with a concrete means of assessing various aspects of an interactive product and the user experience.

- A) User experience goals.
- B) Usability goals.
- C) Interaction design goals.
- D) Evaluation goals.

**To be continued...**

**Answer**

Q9) Consider the following situation:

Users have entered all the necessary personal details. If they want to make another purchase, they can let the website save all their personal details. If they want to make another purchase at that site, they don't have to re-enter all their personal details again.

The aspect of this usability is called the \_\_\_\_\_:

- A) Efficiency.
- B) Safety.
- C) Utility.
- D) Learnability.

Q10) In Microsoft Word, certain menu options are shaded in gray, where users are allowed to perform actions permissible at that stage of activity. These controls show how the principle of design has been demonstrated for \_\_\_\_\_:

- A) Constraints.
- B) Consistency.
- C) Visibility.
- D) Affordance.

Q11) Which of the following is NOT to consider understanding and articulating the problem space?

- A) Identifying usability.
- B) Determine user experience goals.
- C) Focus on his or her individual effort.
- D) Make explicit assumptions and claims.

Q12) One of the advantages of conceptualizing the design space early on is that it prevents the design team from becoming narrowly focused early on. This is called the \_\_\_\_\_:

- A) Open-mindedness.
- B) Common ground.
- C) Orientation.
- D) Metaphors.

**To be continued...**

**Answer**

- Q13) According to the lecture, \_\_\_\_\_ refer to where designers plan to straighten out their thinking before they start laying out their widgets.
- A) Metaphors.
  - B) Analogies.
  - C) Conceptual models.
  - D) Conceptual mappings.

- Q14) Which of the following is NOT the core component of conceptual models?
- A) Metaphors.
  - B) Paradigms.
  - C) Analogies.
  - D) Relationships between the concepts.

- Q15) This structure can provide familiar entities that enable people to readily know what to do at an interface. For example, visualization of an icon called the “recycle bin” is to enable users to find trash items. This structure is called \_\_\_\_\_:
- A) Interface desktop.
  - B) Interface metaphor.
  - C) Interface design.
  - D) Interface icon.

- Q16) Which of the following is NOT the drawback of an Interface Metaphor?
- A) Forces users to only understand the system in terms of the metaphor.
  - B) Makes learning new systems easier.
  - C) Designers can inadvertently use bad existing designs and transfer the bad parts over.
  - D) Limits designers' imagination in coming up with new conceptual models.

**To be continued...**

**Answer**

Q17) When a user selects options from menus in a window environment or on a multi-touch screen, an interaction style has been designed in this system. This interaction style is called the \_\_\_\_\_:

- A) Instructing style.
- B) Conversing style.
- C) Manipulating style.
- D) Exploring style.

Q18) When a human computer interaction specialist plans to adopt a certain form of steps, questions, concepts, challenges, principles, tactics and dimensions, this source is called as the \_\_\_\_\_:

- A) Visions.
- B) Frameworks.
- C) Paradigms.
- D) Theories.

Q19) The kind of informed design that is abstracted from a theory of cognitive processing that explain the way users interact with interactive technologies is called the \_\_\_\_\_:

- A) Vision.
- B) Paradigm.
- C) Theory.
- D) Model.

Q20) A conceptual model is a \_\_\_\_\_ description of a product in terms of what user can do with it and the concepts they need in order to understand how to interact with it.

- A) Metaphorical.
- B) Low-level.
- C) High-level.
- D) Functional.

**To be continued...**

**Answer**

Q21) Which ONE of the following statements best describes the term "mental model"?

- A) A description of a fictitious but realistic user and what they intend to do when using an interactive system.
- B) A description of the subtasks within a task that have to be carried out in order to reach the user's goals.
- C) A person's thought process about how an interactive system works.
- D) A low-cost, simple model of a design or concept used to gather feedback from users and other stakeholders during the early stages of design.

Q22) Cognitive processes are important in Human Computer Interaction because it \_\_\_\_\_:

- A) Takes into account social processes involved and emotional limitations of users.
- B) Restrict theories, modelling tools, guidance and methods that can lead to the depreciation of products.
- C) Provides knowledge about what products can and cannot be expected to do.
- D) Identifies and explains the nature and causes of problems users encounter.

Q23) Which of the following statement is FALSE about a Distributed Cognitive System?

- A) There is a role of verbal and non-verbal behavior.
- B) Various traditional problem-solving that takes place.
- C) Various coordinating mechanisms that are used.
- D) Communication that takes place as the collaborative activity progresses.

Q24) Interaction techniques that allow blind people to read graphs and other visuals on the web through the use of auditory navigation and tactile diagrams, are developed to capitalize on people's \_\_\_\_\_:

- A) Perception skills
- B) Reading and listening skills.
- C) Problem solving, speaking and listening skills.
- D) Memory skills.

**To be continued...**

**Answer**

Q25) Speech-output systems that use artificially generated speech such as written-text-to-speech systems for the blind are developed to capitalize on people's \_\_\_\_\_:

- A) Perception skills.
- B) Reading and listening skills.
- C) Problem solving, speaking and listening skills.
- D) Memory skills.

Q26) Ortony et al's (2005) model of emotion and behavior is couched in terms of different levels of the brain. The lowest parts of the brain that are pre-wired to automatically respond to events happening in the physical world is called as \_\_\_\_\_:

- A) Visceral level.
- B) Behavioral level.
- C) Reflective level.
- D) Reasoning level.

Q27) A Global Positioning System (GPS) that instructs you politely where to go after having taken a wrong turn is an expressive interface through the use of \_\_\_\_\_:

- A) Sonifications.
- B) Vibrotactile feedback.
- C) Spoken messages.
- D) Dynamic icons.

Q28) Users place a file in a recycle bin, and the recycle bin is expanding, is an expressive interface through the use of \_\_\_\_\_:

- A) Sonifications.
- B) Vibrotactile feedback.
- C) Spoken messages.
- D) Dynamic icons.

**To be continued...**



**Answer**

- Q29) One way of using the Orthony et al's (2005) model of emotion is to think about how to design products in terms of three levels. The level that refers to the use and equates with the traditional values of usability is called \_\_\_\_\_:
- A) Visceral design.  
B) Behavioral design.  
C) Reflective design.  
D) Sensory design.
- Q30) The computing approach that develops computer-based systems that try to recognize and express emotions in the same way humans do is called the \_\_\_\_\_:
- A) Usability Computing.  
B) Ubiquitous Computing.  
C) Human Intelligence.  
D) Affective Computing.
- Q31) This type of menu is good at displaying a small number of options at the same time and where the size of the display is small. This is called the \_\_\_\_\_:
- A) Flat menu.  
B) Expanding menu.  
C) Contextual menu.  
D) Abstraction menu.
- Q32) Which of the statement is FALSE regarding "Virtual Reality"?
- A) In virtual reality, the view of the game is through user's own eyes.  
B) Virtual reality enables users to interact with objects and navigate with 3D space.  
C) Virtual reality offers a head-mounted display that is comfortable to wear, and can cause motion sickness and disorientation.  
D) Simulations of the world can be constructed to have a higher fidelity with the objects they present compared with multimedia.

**To be continued...**

**Answer**

Q33) An interface that allows users to quickly and easily annotate existing documents, such as spreadsheets, presentations, and diagrams can be referred to \_\_\_\_\_:

- A) Digital robotics.
- B) Digital haptic system.
- C) Digital visualisation.
- D) Digital pen.

Q34) \_\_\_\_\_ is a communication pathway between a person's brain waves and an external device, such as a cursor on a screen.

- A) Air-based gesture.
- B) Information visualisation.
- C) Brain-computer interface.
- D) Augmented reality.

Q35) \_\_\_\_\_ uses sensor-based interaction, where physical objects, e.g.: bricks, balls and cubes, are coupled with digital representations.

- A) Tangible interface.
- B) Graphic user interface.
- C) Air-based gestures.
- D) Pen.

Q36) An interface that can be used to provide vibrotactile feedback to guide people when learning musical instrument, such as violin and drums can be referred to as \_\_\_\_\_:

- A) Shareable.
- B) Multimodal.
- C) Haptic.
- D) Collocated.

**To be continued...**

**Answer**

Q37) \_\_\_\_\_ is one of WIMP that could be scrolled, stretched, overlapped, opened, closed, and moved around the screen using the mouse.

- A) Windows.
- B) Icons.
- C) Menus.
- D) Pointing Device.

Q38) Which of the following statement is FALSE about command-based?

- A) The key research questions in command-based are form, name types and structure.
- B) It facilitates rapid access to multiple representations of information.
- C) Consistency is the most important design principle in command-based.
- D) It is popular for web scripting.

Q39) The basic building blocks of WIMP are \_\_\_\_\_:

- A) Flat menus, expanding menus and contextual menus.
- B) Windows, menus, icons and pointing devices.
- C) Icons, keyboard shortcuts and pop-up/predictable text command.
- D) Scenario, persona and use-case.

Q40) The disadvantage of using a \_\_\_\_\_ as interface is that it can be difficult to see options on the screen because a user's hand can occlude part of it when writing.

- A) Mobile.
- B) Web.
- C) Pen.
- D) Brain signal.

**To be continued...**

**PART B - STRUCTURED (20 MARKS)**

**Write down your answer in the answer box provided**

Question 1.

1a) Briefly describe CSCW Time/Space Matrix (8 marks)

1b) Give one example for each CSCW Time/Space Matrix (2 marks)

**Answer**

**To be continued...**

Question 2.

2a) Briefly describe AgileUX (4 marks).

2b) Briefly describe three (3) practical areas in AgileUX (6 marks):

**Answer**

**End of Page**

